

WHAT IS CLAIMED IS:

1. A vehicle interior member having an air bag door portion comprising:
  - a three-layer skin;
  - a body portion substrate formed of a hard resin material and injection molded together with said three-layer skin; and
  - an air bag door portion substrate formed of the same hard resin material as said body portion and injection molded integrally with said body portion substrate,
    - wherein said air bag door portion substrate has a groove portion forming a substrate side tear line that is formed during said injection molding to define a shape of
- 10 a projecting portion formed on a mold and torn upon deployment of an air bag, said three-layer skin has a face close to said air bag door portion substrate, and said three-layer skin has a diagonal cut portion for a skin side tear line that is formed to extend from said face of said three-layer skin at a predetermined inclination angle such that an opening portion of said diagonal cut portion is directed substantially toward the groove portion for said substrate side tear line.
- 15 2. A vehicle interior member according to claim 1, wherein said diagonal cut portion and said groove portion are positioned such that an edge of the substrate of a passenger side portion which has been torn and deployed upon deployment of the air bag door is hidden by the skin.
- 20 3. A vehicle interior member according to claim 2, wherein the groove forming said substrate side tear line extends in a direction of the width of a vehicle, and the diagonal cut portion forming said skin side tear line extends in a direction of the width of the vehicle at a predetermined interval from the groove forming said substrate side tear line to the fore of the vehicle.

4. A vehicle interior member having an air bag door portion comprising:  
an air bag door portion having a three-layer skin, and a substrate formed of a hard resin and injection molded together with said three-layer skin; and  
a body portion to which said air bag door portion is fixed,  
wherein said air bag door portion substrate has a groove portion forming a substrate side tear line that is formed during said injection molding to define a shape of a projecting portion formed on a mold and is torn upon deployment of an air bag, said three-layer skin has a face close to said air bag door portion substrate, and said three-layer skin has a diagonal cut portion forming a skin side tear line that is formed to extend from a face of said three-layer skin at a predetermined inclination angle such that an opening portion of said diagonal cut portion is directed toward the groove portion forming said substrate side tear line.
5. A vehicle interior member according to claim 4, wherein said body portion includes a skin having a design face formed of a same kind of material as said three-layer skin and a substrate formed of a hard resin, said body portion having an opening to which said air bag door portion is fixed.
6. A vehicle interior member according to claim 5, wherein said skin of said body portion is a three-layer skin formed of a same kind of material as said three-layer skin of said air bag door portion and said substrate of said body portion is formed of a hard resin different from said hard resin of said substrate of said air bag door portion.
7. A vehicle interior member according to claim 4, wherein said diagonal cut portion and said groove portion are positioned such that an edge of the substrate of a passenger side portion which has been torn and deployed upon deployment of the air bag door is hidden by the skin.

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8. A vehicle interior member according to claim 7, wherein the groove forming said substrate side tear line extends in a direction of the width of a vehicle, and the diagonal cut portion forming said skin side tear line extends in a direction of the width of the vehicle at a predetermined interval from the groove forming said substrate side tear line to the fore of the vehicle.
9. A vehicle interior member having an air bag door portion comprising:
- a three-layer skin;
  - a body portion substrate formed of a hard resin material and injection molded together with said three-layer skin; and
10. an air bag door portion substrate formed of a same hard resin material as said body portion substrate and injection molded integrally therewith,
- wherein said three-layer skin has a diagonal cut portion forming a skin side tear line which has a cutting direction inclined in a direction substantially reverse to a flow direction of the hard resin used during injection molding of said body portion substrate and said air bag door portion substrate and is torn upon deployment of an air bag.
10. A vehicle interior member according to claim 9, wherein said air bag door portion substrate has a groove for a substrate side tear line that is spaced from an opening of said diagonal cut portion by a predetermined interval in said flow direction of the hard resin, and which is torn upon deployment of the air bag.
11. A vehicle interior member according to claim 10, wherein said skin side tear line and a substrate side tear line extend in a direction substantially parallel to said flow direction of the hard resin, and said air bag door portion substrate has a thin portion that is formed adjacent to said groove, said thin portion being positioned at a site facing an opening portion of said diagonal cut portion and extending along the opening portion of

said diagonal cut portion in a direction substantially parallel to said flow direction of the hard resin.

12. A vehicle interior member according to claim 9,

wherein said hard resin is injected in a front-to-rear direction relative to a vehicle to which the vehicle interior member is to be fit,

each of said skin side tear line and a substrate side tear line is formed in a generally "H" shaped tear line including a lateral tear line extending in a direction of a vehicle width and longitudinal tear lines each extending through a corresponding one of opposite end portions of said lateral tear line in the front-to-rear direction relative to the vehicle,

10 said diagonal cut portion forming said lateral tear line of said skin side tear line is spaced from a groove forming said lateral tear line of said substrate side tear line by a predetermined interval toward a vehicle front, and

15 said diagonal cut portion forming each longitudinal tear line of said skin side tear line is spaced from a groove forming a corresponding one of said longitudinal tear lines of said substrate side tear line by a predetermined interval in an outward direction with respect to the air bag door portion.

13. A vehicle interior member according to claim 12, wherein in said longitudinal tear lines, said air bag door portion substrate has a thin portion that is formed adjacent to said groove forming said substrate side tear line, said thin portion being positioned at a site facing an opening portion of said diagonal cut portion forming said skin side tear line and extending along the opening portion of said diagonal cut portion in a direction substantially parallel to said flow direction of the hard resin.

20 14. A vehicle interior member having an air bag door portion, comprising:

an air bag door portion having a three-layer skin and a substrate formed of a hard resin and injection molded together with said three-layer skin; and  
a body portion to which said air bag door portion is fixed,  
wherein said three-layer skin has a diagonal cut portion for a skin side tear line  
5 that has a cutting direction inclined in a direction substantially reverse to a flow direction of the hard resin during injection molding of said air bag door portion substrate and is torn upon deployment of an air bag.

15. A vehicle interior member according to claim 14, wherein said air bag door portion substrate has a groove for a substrate side tear line that is spaced from an opening of said diagonal cut portion by a predetermined interval in said flow direction of the hard resin, and which is torn upon deployment of the air bag.  
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16. A vehicle interior member according to claim 14, wherein said hard resin is injected in a front-rear direction relative to a vehicle to which the vehicle interior member is to be fit,

15 each of said skin side tear line and a substrate side tear line is a generally "H" shaped tear line including a lateral tear line extending in a direction of a vehicle width and longitudinal tear lines each extending through a corresponding one of opposite end portions of said lateral tear line in a front-rear direction relative to the vehicle,

20 said diagonal cut portion forming said lateral tear line of said skin side tear line is spaced from a groove forming said lateral tear line of said substrate side tear line by a predetermined interval toward a vehicle front, and

25 said diagonal cut portion forming each longitudinal tear line of said skin side tear line is spaced from a groove forming a corresponding one of said longitudinal tear lines of said substrate side tear line by a predetermined interval in an outward direction with respect to the air bag door portion.

17. A vehicle interior member according to claim 16, wherein in said longitudinal tear lines, said air bag door portion substrate has a thin portion that is formed adjacent to said groove forming said substrate side tear line, said thin portion being positioned at a site facing an opening portion of said diagonal cut portion forming said skin side tear line and extending along the opening portion of said diagonal cut portion in a direction substantially parallel to said flow direction of the hard resin.

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18. A method for molding a vehicle interior member having an air bag door portion comprising:

10 setting a three-layer skin having a diagonal cut portion with a cutting direction inclined relative to a surface in a first mold;

15 assembling said first mold and a second mold;  
injecting a hard resin into a cavity defined by said three-layer skin and said second mold to form a substrate of an interior member integral with said three-layer skin while controlling injection of said hard resin such that a flow direction of said hard resin is substantially opposite to the cutting direction of said diagonal cut portion; and

cooling an integral molding of said three-layer skin and said substrate after injecting the hard resin.

19. A method for molding a vehicle interior member according to claim 18, wherein said second mold has a projected portion that forms a groove forming a tear line of said substrate that is set at a position spaced from an opening of said diagonal cut portion by a predetermined interval in said flow direction of said hard resin.

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25 20. A method for molding a vehicle interior member according to claim 19, wherein said substrate side tear line and a skin side tear line extend in a direction substantially parallel to said direction of said hard resin, and said second mold has a stepped portion that is formed adjacent to said projected portion and forms a thin

portion in said substrate, said stepped portion being set at a site facing an opening portion of said diagonal cut portion and extending along the opening portion of said diagonal cut portion in a direction substantially parallel to said flow direction of the hard resin.